



# Marshall Space Flight Center

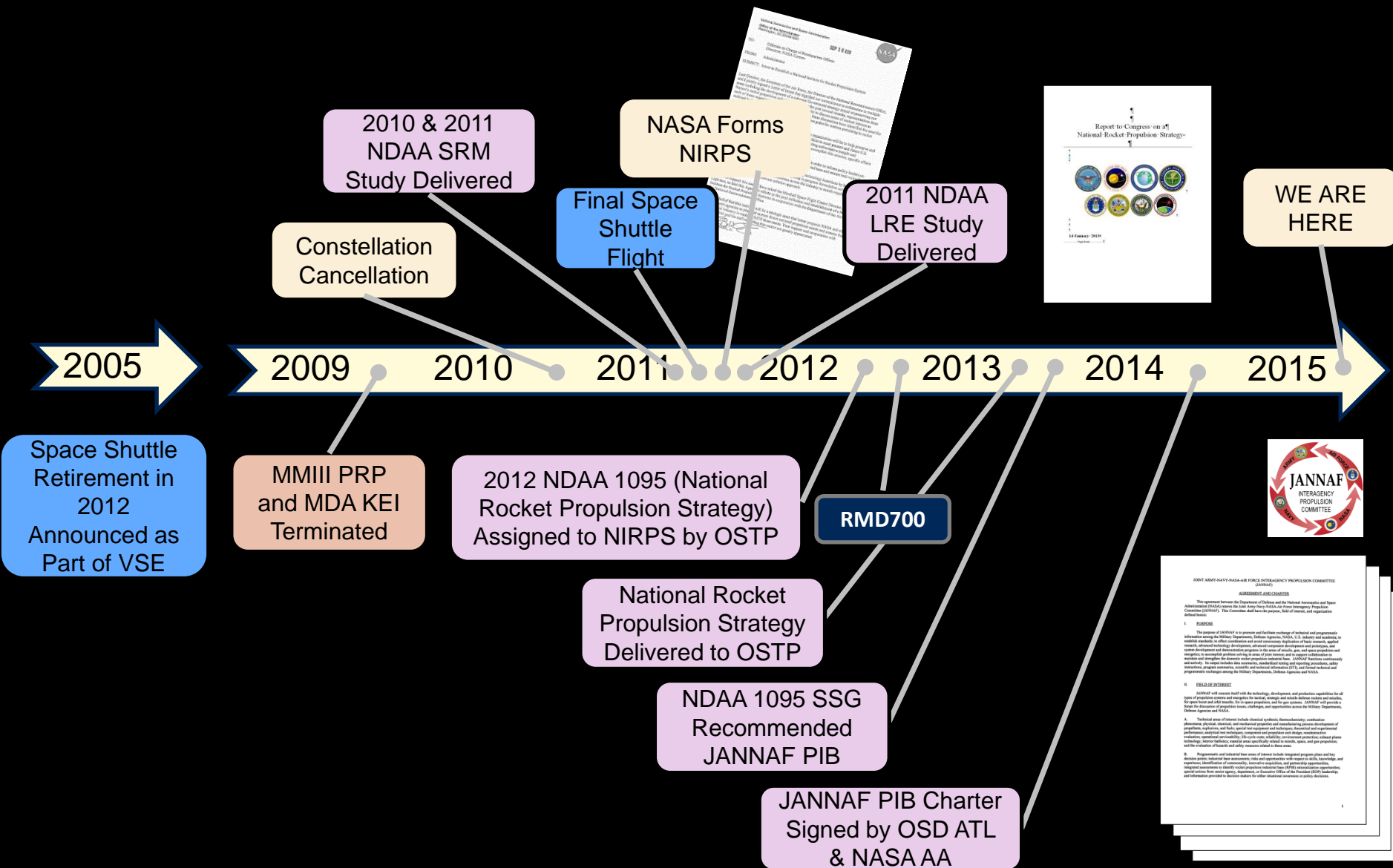
## Introduction to JANNAF PIB

*June 2, 2015*



# marshall





# Grand Challenges Facing Rocket Propulsion



Lack of integrated space strategies across Government Agencies and Departments

Lack of multi-Agency vision

Overall decline in aerospace engineer demand

Frequent program starts & cancellations

Shuttle retirement

Uncertainty in future needs

Industrial base decline

Overcapacity of production capability

Rising supplier costs

Large solid rocket motor industrial base decline

Reduce development & sustainment costs

Foster access to facilities & expertise

Support industrial base competitiveness & resilience

Collaborate across Agencies

Implement an integrated Science & technology plan

Invigorate the STEM pipeline

Lack of predictable long-term funding

Lack of sustained technology development

Aging workforce

Lack of defined space missions

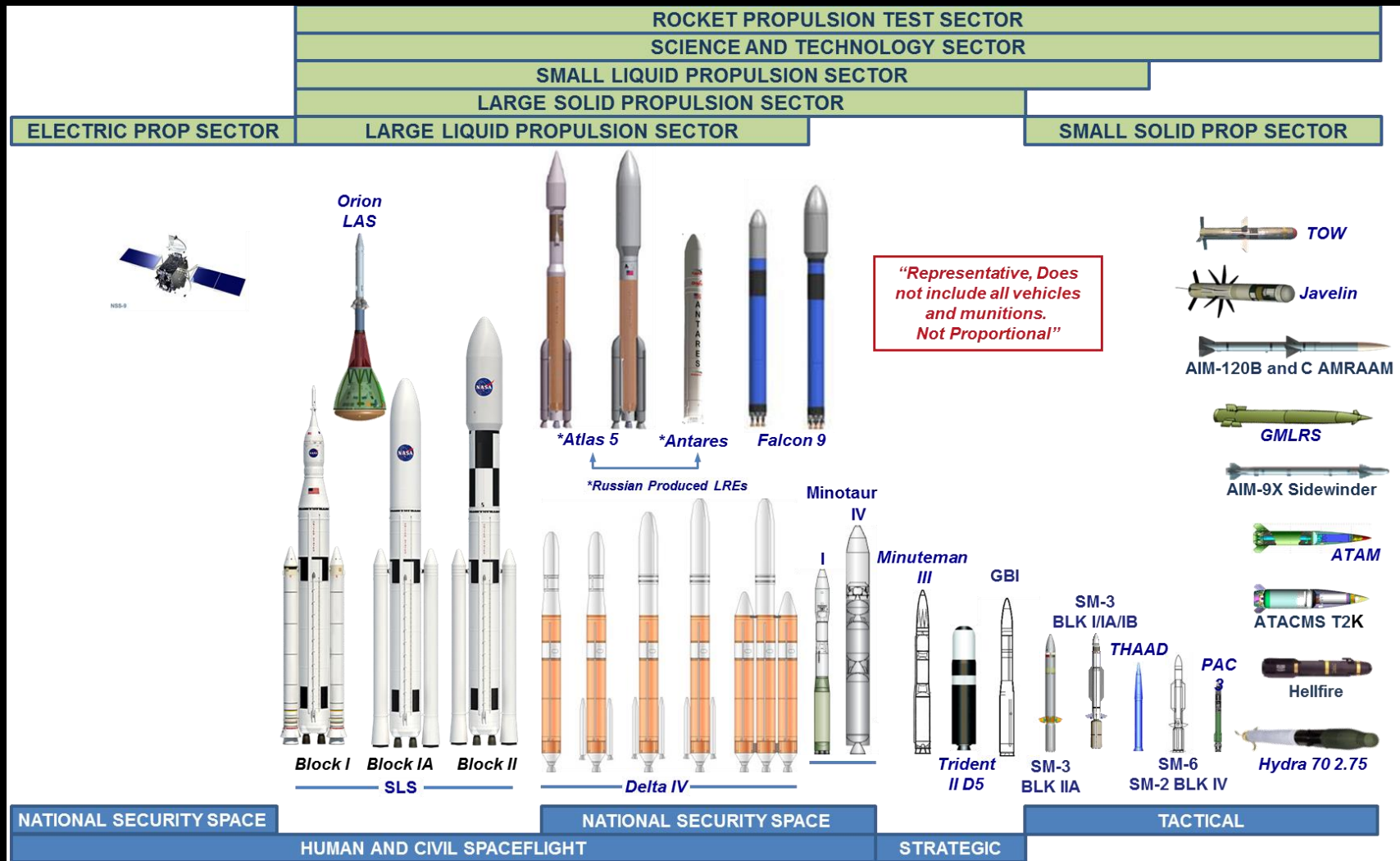
Fewer engineers have technology development experience

Difficulty in access to government facilities

Systems infrastructure, supply chain, & skill base challenges

**Loss of competitiveness in the global market**

# Highly Interconnected Rocket Propulsion Industrial Base Serving Government and Commercial Needs



*Changes in a program can have effects on seemingly unrelated programs.*

# Grand Challenges Still Challenge Us

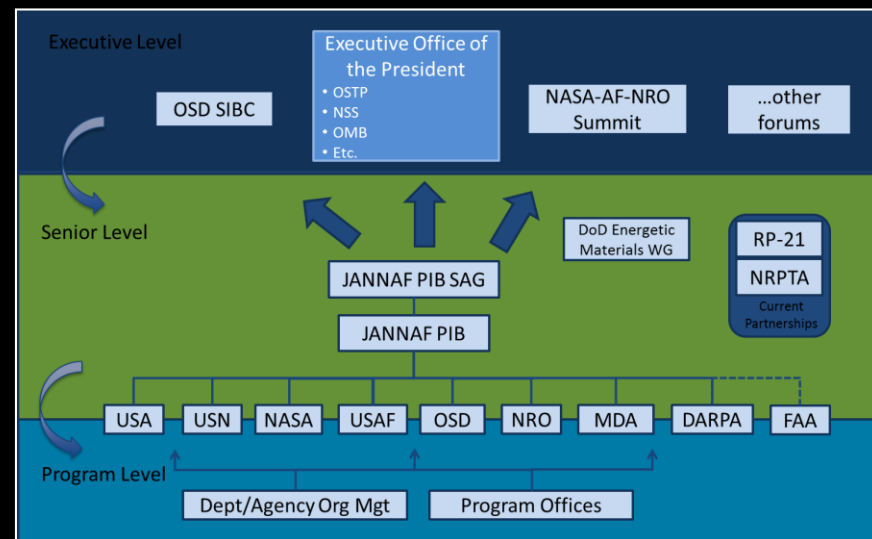
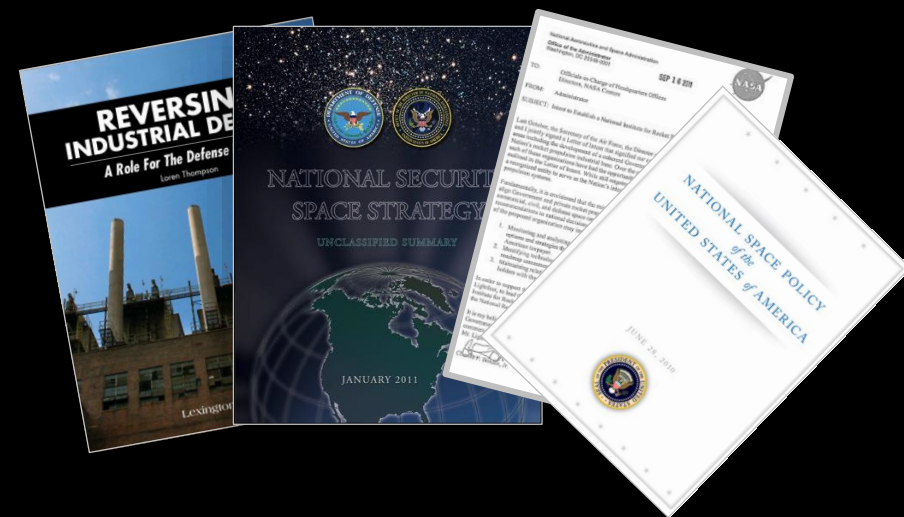


- Continued industry consolidation
- Even more interconnectedness between agencies, sectors and programs
- Limited USG rocket propulsion budgets
- Increasing need to lower costs while improving performance
- USG needs a way to understand the whole picture of the RPIB
- JANNAF is a trusted, integrated Government-wide forum
- Augmentation of JANNAF with a Programmatic and Industrial Base group allows leveraging of resources, synergy with technical activities

# JANNAF PIB is Executing Tasks of National Importance



- Congressional and Administration concern about Rocket Propulsion Industrial Base (RPIB)
  - Widespread recognition of the problem
  - Sustainment of the solid rocket motor and liquid rocket engine industrial base is a national challenge that spans multiple departments and agencies of the U.S. Government.
  - Integrated approach among U.S. Government agencies
- PIB Supports Interagency Communication and Collaboration
  - JANNAF PIB Senior Advisory Group (SAG) established
    - Co-Chaired by NASA & DOD DUSD MIBP
    - **Members from Army, Navy, Air Force, NRO, MDA, OSD, & NASA**
    - JANNAF NASA/DOD PIB Charter Signed: June 2014



# PIB is an Integral Part of JANNAF



- This is the first JANNAF general meeting with integrated PIB activities
- The PIB is creating products that directly affect policy and decisions made at the highest levels of the U.S. Government
  - Products and Activities:
    - Integrated (i.e., collated) program plans & key decision points
    - Industrial base assessments
    - Identification of commonality, innovative acquisition, and partnership opportunities
    - Special actions from senior agency, department, or EOP leadership
    - Provide decision makers information for situational awareness or decisions in a timely and efficient manner
  - Working Group Studies
    - Small Solid Rocket Motor Capabilities (2015 NDAA task)
    - Ammonium Perchlorate industrial base capabilities and alternatives
    - Domestic Boost Propulsion
    - Helium Stewardship Act of 2013 effects
  - PIB Session open to all attendees (get details [here](#))
    - Senior leader panel discussion
    - Paper presentations

*PIB Panel  
Session: 3T  
Room: Capital II  
Time: 1:30 pm  
Wednesday, 6/3/15*

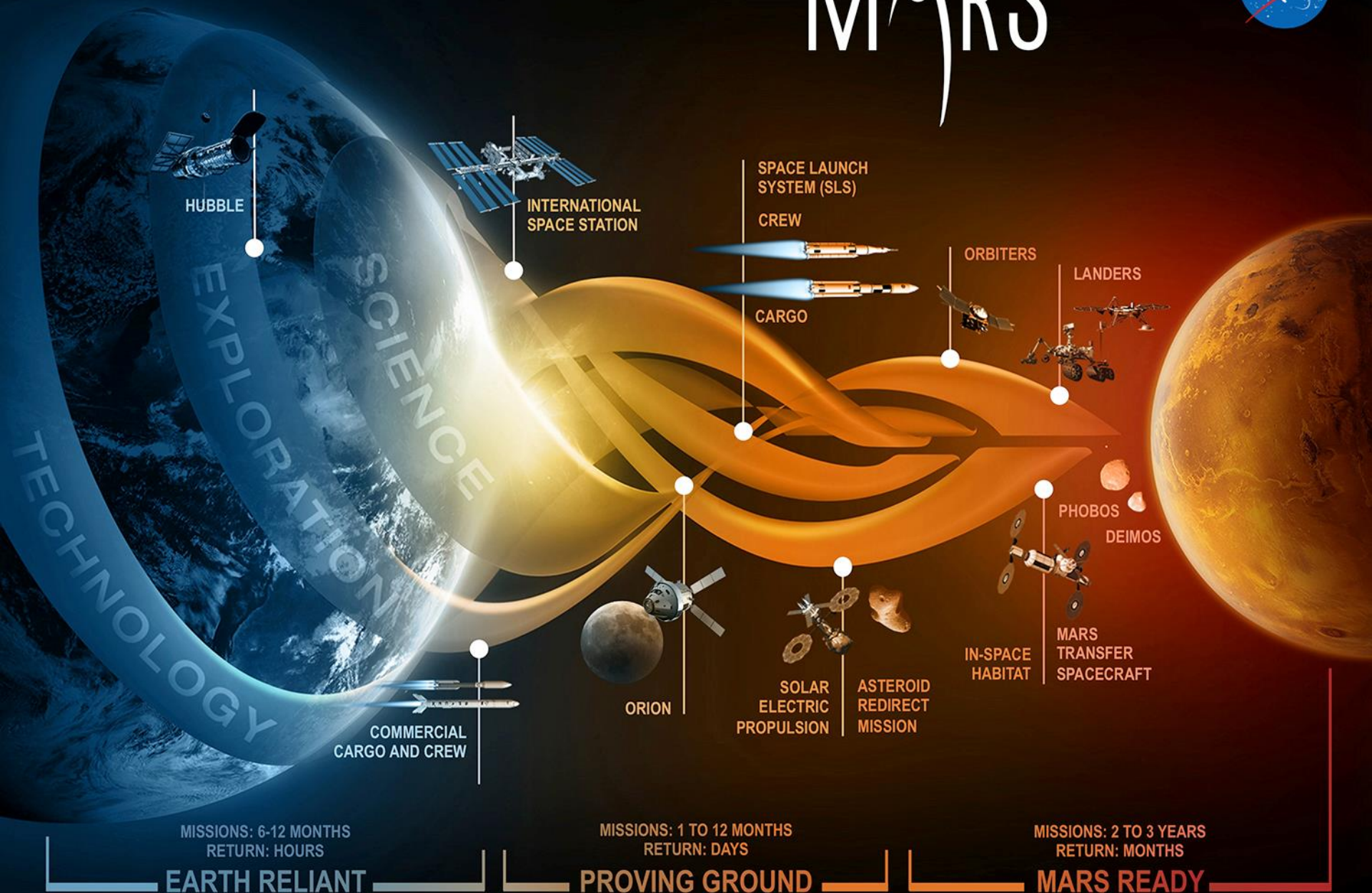
# JANNAF PIB Encompasses All of the Equity Holders in Rocket Propulsion for the US Government



- Working Groups have key memberships from project, program, engineering, and R&D disciplines.
- The JANNAF Programmatic and Industrial Base (PIB) Executive committee integrates the working groups and has program, project, and engineering senior managers.
- The JANNAF PIB Senior Advisory Group consists of key senior executives and flag officers and sets the strategy for the JANNAF PIB.



# JOURNEY TO MARS





[www.nasa.gov/marshall](http://www.nasa.gov/marshall)



# Backup Slides

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# Senior Advisory Group Membership

JANNAF Programmatic & Industrial Base Senior Advisory Group (SAG)				
Title	First Name	Last Name	Dept/Agency	Title
Dr.	L. Dale	Thomas (Co-Chair)	NASA	Associate Center Director, Technical, NASA/MSFC
Mr.	Andre'	Gudger (Co-Chair)	OSD	Deputy Assistant Secretary of Defense (Manufacturing & Industrial Base Policy) DASD (MIBP)
Dr.	Spiro G.	Lekoudis	OSD	AT&L/R&E/Research and Engineering
Mr.	Dyke	Weatherington	OSD	AT&L/SIO Deputy Assistant Secretary of Defense for Space and Intelligence
Mr.	Barry	Pike	USA	Deputy PEO, Missiles and Space
VADM	Terry	Benedict	USN	NAVY/Director Strategic Systems Programs
Dr.	Claire	Leon	USAF	Executive Director for Space Launch Enterprise
Dr.	Billy W.	Mullins	USAF	SAF/A-10 Assistant Chief of Staff, Strategic Deterrence & Nuclear Integration
			USAF	SAF/EA4S, Executive Agent for Space
Maj Gen	Scott	Jansson	USAF	AFPEO/SS Program Executive Officer for Strategic Systems
Mr.	William	Hill	NASA	NASA/HQ/CM Deputy Associate Administrator for Exploration Systems Development
Mr.	Benjamin	Neuman	NASA	NASA/HQ/CN Division Director for Human Spaceflight Capabilities
Mr.	Jim	Norman	NASA	NASA/HQ - Assistant Associate Administrator for Launch Services
Ms.	Karen	Borrows	USN	Executive Director/SEA 00VW Naval Ordnance Safety and Security Activity Indian Head, MD 20640
Ms.	Patricia	Gore	OSD/MDA	MDA/ECM Director, Industrial Manufacturing and Technology
Brig Gen Maj Gen	Anthony J. Steve	Cotton Denker (Summer 2015 process in)	NRO	Deputy Director, National Reconnaissance Office

# PIB Executive Committee Membership

JANNAF Programmatic & Industrial Base Executive Committee (PEC)				
Title	First Name	Last Name		Affiliation
Dr.	Rajiv	Doreswamy (Chair)	NASA	NASA/MSFC
Mr.	Robert	Read (Co-Chair)	OSD	OSD-ATL
Dr.	Kendall	Brown (Alt Chair)	NASA	NASA/MSFC
Dr.	Christine	Michienzi	OSD	OSD-ATL
Mr.	Stuart	Blashill	USN	NAVY/China Lake
Mr.	Shahab	Chaudhry	USN	NAVY/SSP
Mr.	Frank	Tse	USN	NAVY/NSWCIHD
Mr.	Andy	Culbertson	OSD	OSD/R&E
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	James	Fernandez	USAF	USAF/PEO/SP Space Launch Enterprise
Maj	Tim	Purcell	USAF	USAF/EA4S
Lt Col	Bill	Barrington	USAF	USAF/A10
Dr.	Jamie B.	Neidert	USA	ARMY/AMRDEC
Mr.	David	Tritt	USA	Army/PEO M&S
Mr.	John	Honeycutt	NASA	NASA/MSFC/SLS Program
Dr.	George	Schmidt	NASA	NASA/GRC
Mr.	Thomas	Williams	NASA	NASA/MSFC/Engineering
Lt Col	Mark	Cinnamon	NRO	NRO/OSL
Ms.	Megan	Meisner	MDA	Industrial Manufacturing and Technology

# PIB Working Group Membership

**JANNAF Programmatic & Industrial Base Large Liquid Propulsion Working Group**

Title	First Name	Last Name		Affiliation
Dr.	Kendall	Brown (Lead)	NASA	NASA/MSFC/FP30
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	James	Fernandez	USAF	USAF/PEO/SP Space Launch Enterprise
Maj	Lee	Kashka	USAF	USAF SMC/LRE
Mr.	Bill	Jacobs	NASA	NASA/MSFC/SLS
Mr.	George	Simone	NASA	NASA/LSP
Lt Col (s)	Tim	Purcell	USAF	SAF/SP/EA4SS
Ms.	Dayna	Ise	NASA	NASA/MSFC/FP30 - Commercial Crew
Mr.	Robert	Read	OSD	OSD/ATL/MIBP
Mr.	Kevin	Dickens	NASA	NASA/GRC

**JANNAF Programmatic & Industrial Base Large Solid Rocket Motor Working Group**

Title	First Name	Last Name		Affiliation
Mr.	Shahab	Chaudhry (Lead)	USN	NAVY/SSP
Mr.	David	Olsen	USN	NAVY/SSP
Dr.	Carlos	Lopez	USN	NAVY/SSP
Dr.	Christine	Michienzi	OSD	OSD-ATL
Mr.	Alex	Priskos	NASA	NASA/MSFC
Mr.	Mark	Cooper	NASA	NASA
Lt Col	Bill	Barrington	NASA	USAF/A10
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	Kirk	Newman	OSD	MDA
Mr.	Robert	Read	OSD	OSD-ATL

**JANNAF Programmatic & Industrial Base Small Liquid Propulsion Working Group**

Title	First Name	Last Name		Affiliation
Mr.	Chuck	Pierce (Lead)	NASA	NASA/MSFC
Mr.	James L.	Cannon	NASA	NASA/MSFC/ER01
Mr.	James	Fernandez	USAF	USAF/PEO/SP Space Launch Enterprise
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	Robert	Read	OSD	OSD-ATL
Mr.	Dmitriy	Plaks	USA	Army/MDA
Mr.	Kevin	Dickens	NASA	NASA/GRC

**JANNAF Programmatic & Industrial Base Small Solid Rocket Motor Working Group**

Title	First Name	Last Name		Affiliation
Mr.	Frank	Tse (Lead)	USN	NAVY/NSWC/HD
Mr.	Al	Stern	USN	USN/NSWC/HEODTD
Mr.	Nolan	Walton	USN	NAVY/SSP
Mr.	Stuart	Blashill	USN	NAVY/China Lake
Dr.	Christine	Michienzi	OSD	OSD-ATL
Mr.	David	Tritt	USA	Army/PEO M&S
Mr.	Kevin	Blacklock	USA	Army/AMRDEC
Dr.	Jamie B.	Neidert	USA	ARMY/AMRDEC
Mr.	Drew	DeGeorge	USAF	AF/AFRL/RQR
Mr.	Mark	Cooper	NASA	NASA/MSFC
Mr.	Steven	Harvison	NASA	NASA/MSFC
Mr.	Kirk	Newman	OSD	MDA Aegis BMD
Mr.	Robert	Read	OSD	OSD-ATL/MIBP

**JANNAF Programmatic & Industrial Base Science & Technology Working Group**

Title	First Name	Last Name		Affiliation
Mr.	Drew	DeGeorge (Lead)	USAF	AF/AFRL/RQR
Mr.	James L.	Cannon	NASA	NASA/MSFC/ER01
Mr.	Andy	Culbertson	OSD	OSD/R&E
Dr.	Christine	Michienzi	OSD	OSD-ATL
Mr.	Scott	Fuller	USN	USN/NAWC
Mr.	Mark D.	Klem	NASA	NASA/GRC-RPP0
Mr.	Carlos	Lopez	USN	NAVY/SSP
Ms.	Megan B.	Meisner	MDA	MDA/DEC
Dr.	Jamie B.	Neidert	USAF	ARMY/AMRDEC
Mr.	Bob	Read	OSD	OSD-ATL/MIBP
Mr.	David	Tritt	USAF	Army/PEO M&S
Mr.	Richard	Ryan	NASA	NASA/MSFC/EE
Mr.	Michael	Meyer	NASA	NASA/GRC

**JANNAF Programmatic & Industrial Base Test & Evaluation Working Group**

Title	First Name	Last Name		Affiliation
Mr.	Mark	Moody (Lead)	NASA	NASA/SSC/RPT/TA00

**JANNAF Programmatic & Industrial Base Electric Propulsion Working Group**

Title	First Name	Last Name		Affiliation
Mr.	David	Jacobson	NASA	NASA/GRC